

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS:

1. (Withdrawn) An apparatus for aligning a dispenser, comprising:
a table having a first alignment mark;
an alignment plate provided along at least one side of the table;
at least one syringe supplying a dispensing material to the alignment plate through a nozzle provided at one end portion thereof to form a second alignment mark;
a first image camera provided along a side of the syringe and detecting an image of the second alignment mark;
a second image camera detecting an image of the first alignment mark; and
an alignment control unit aligning the image of the second alignment mark and a first reference position, and aligning the image of the first alignment mark and a second reference position.
2. (Withdrawn) The apparatus according to claim 1, wherein the first alignment mark is engraved into the table.
3. (Withdrawn) The apparatus according to claim 1, wherein the first alignment mark is formed of light reflecting material.
4. (Withdrawn) The apparatus according to claim 1, wherein the first alignment mark includes aluminum oxide.

5. (Withdrawn) The apparatus according to claim 1, wherein the first and second alignment marks have horizontal and vertical patterns.

6. (Withdrawn) The apparatus according to claim 1, wherein the alignment plate includes glass having an area smaller than an area of the table.

7. (Withdrawn) The apparatus according to claim 1, wherein the alignment control unit aligns the image of the first image camera and the first reference position by moving the table.

8. (Withdrawn) The apparatus according to claim 1, wherein the alignment control unit aligns the image of the second image camera and the second reference position by moving the second image camera.

9. (Withdrawn) The apparatus according to claim 1, wherein the alignment control unit comprises:

a first display part displaying an image of the second alignment mark detected by the first image camera and the first reference position;

a second display part displaying the image of the first alignment mark detected by the second image camera and the second reference position; and

a control unit driving the table along at least one of X- and Y-directions to align the image of the second alignment mark and the first reference position, and driving the second image camera along at least one of the X- and Y-directions to align the image of the first alignment mark and the second reference position.

10. (Withdrawn) The apparatus according to claim 1, wherein a substrate of a liquid crystal display panel is loaded onto the table.

11. (Withdrawn) The apparatus according to the claim 10, wherein an area of the alignment plate is less than an area of the substrate.

12. (Currently Amended) A method for aligning a dispenser, comprising:
providing a table having a first alignment mark on which a substrate is loaded;
attaching an alignment plate ~~having a first alignment mark~~ along at least one side of ~~a~~ the table;

dispensing sealant on the alignment plate using a first syringe to form a second alignment mark on the alignment plate;

detecting the image of the second alignment mark in a first display unit using a first image camera;

moving the table along at least one of X- and Y-directions to align the image of the second alignment mark with a first reference position using the first display unit;

detecting the image of the first alignment mark in a second display unit using a second image camera, the image of the first alignment mark is detected to the second image camera through the substrate; ~~and~~

moving the second image camera along at least one of X- and Y-directions to align the image of the first alignment mark with a second reference position using the second display unit; and

forming a seal pattern on the substrate using at least one second syringe.

wherein the alignment plate is disposed at the side of the substrate on the table and a surface of the alignment plate is coplanar to a surface of the substrate.

13-19. (Cancelled)

20. (Currently Amended) The method according to claim 12 ~~19~~, wherein the seal pattern includes an opening.

21. (Currently Amended) The method according to claim 12 ~~19~~, wherein the seal pattern includes a closed loop pattern.

22. (Original) The method according to claim 12, further comprising:
forming third alignment marks on the alignment plate attached to the table using a plurality of second syringes; and
detecting images of the third alignment marks using third image cameras provided along a side portion of the second syringes and aligning the second syringes.

23. (Original) The method according to claim 12, further comprising:
descending at least one second syringe to contact the alignment plate attached to the table; and
ascending the second syringe to form a distance between a nozzle of the second syringe and a surface of the alignment plate.

24. (Original) The method according to claim 23, wherein the surface of the alignment plate attached to the table is coplanar to a surface of a substrate of a liquid crystal display panel loaded onto the table.

25. (Original) The method according to claim 12, wherein the first and second alignment marks have horizontal and vertical patterns.

26-33. (Cancelled)

34. (Withdrawn) A dispenser alignment system, comprising:
an alignment plate provided along at least one side of a table, the table having a first alignment mark and the alignment plate having a second alignment mark;
a first image camera detecting an image of the second alignment mark;
a second image camera detecting an image of the first alignment mark; and
an alignment control unit aligning the image of the second alignment mark and a first reference position, and aligning an image of the first alignment mark and a second reference position.

35. (Withdrawn) The system according to claim 34, wherein the alignment control unit moves the table to align the image of the second reference mark and the first reference position.

36. (Withdrawn) The apparatus according to claim 34, wherein the alignment control unit moves the second image camera to align the image of the first alignment mark and the second reference position.

37. (Withdrawn) The system according to claim 34, wherein the alignment control unit comprises:

a first display part displaying the image of the second alignment mark detected by the first image camera and the first reference position;

a second display part displaying the image of the first alignment mark detected by the second image camera and the second reference position; and

a control unit driving the table along at least one of X- and Y-directions to align the image of the second alignment mark and the first reference position, and driving the second image camera along at least one of the X- and Y-directions to align the image of the first alignment mark and the second reference position.

38. (Withdrawn) The system according to claim 34, wherein a substrate of a liquid crystal display panel is loaded onto the table.

39. (Withdrawn) The system according to the claim 38, wherein an area of the alignment plate is less than an area of the substrate.

40. (Withdrawn) The system according to claim 38, wherein a surface of the substrate is coplanar with a surface of the alignment plate.